

Site Survey Forms

DRAFT

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1.0 Introduction

In addition to interview questionnaire responses and other material supplied, Federal Engineering (*FE*) understands that additional site information may need to be collected from physical site surveys. This will not be an itemized inventory, but a determination of the systems and equipment status to complete the Statement of Work (SOW). *FE* has developed two site-specific survey forms to aid in fulfilling the requirements of the project. The following overview describes the survey forms, the differences between them, and brief section descriptions.

1.1 Dispatch center site survey form description

The purpose of the dispatch center survey form is to capture relevant site and equipment information in a 911 PSAP or dispatch center environment. The form enables survey teams to verify existing site information, determine site expansion capability, and perform in-depth site inventory and assessment. Some of the sections in the dispatch center form are identical to those in the remote RF site form. However, the dispatch center form is broken down into twenty three alphabetical sections. Some sections may not be applicable to each site. In some cases a PSAP is also an RF site, and in other cases, traffic is backhauled to and from a nearby RF site. Nevertheless, the form is organized in such a manner to facilitate smooth and accurate data collection.

The first four sections of the form identify general site information, access requirements, perimeter security, and surrounding land space. Sections E, F, G and H are for gathering information about the dispatch console system, operator positions, and peripheral equipment. Section I pertains to documenting console electronics, equipment room layout, and installation practices. Section J provides for a complete inventory of console and radio equipment within the dispatch center. Sections K, L and M deal with backhaul, power, and any other miscellaneous systems that contribute to the overall operation of the facility. If applicable, sections N and O call for a close inspection of the type and condition of structures, antennas, and lines. Sections P, Q, R, S, and T require graphics and drawings including a street-level map, site plan, electronics room floor plan, dispatch area floor plan, and tower-antenna layout. Sections U and V provide a site photograph checklist and a means to organize compressed photos. The last section of the form allows for an overall assessment of site conditions, usefulness for collocation, and conformance to industry best practices. Please find the dispatch center site survey form located in Attachment A.

1.2 Remote RF site survey form description

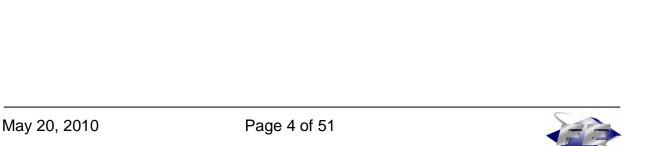
The purpose of the remote RF survey form is to capture relevant site and equipment information in a remote RF site environment. However, some of the sections in this form are identical to those in the dispatch center form. This form enables survey teams to verify existing site information, determine site expansion capability, and perform in-





depth site inventory and assessment. The remote RF form is broken down into eighteen alphabetical sections that facilitate smooth and accurate data collection.

Sections A, B, C, and D of the form identify general site information, access requirements, perimeter security, and surrounding land space. Sections E and F call for a close inspection of the type and condition of structures, antennas, and lines. Section G pertains to documenting communications shelters, equipment room layout, and installation practices. Section H provides for a complete inventory of radio equipment at the site. Sections I, J, and K deal with backhaul, power, and any other miscellaneous systems that contribute to the overall site operation Sections L, M, N, and O require graphics and drawings including a street-level map, site plan, RF housing floor plan, and tower-antenna layout. Sections P and Q provide a site photograph checklist and a means to organize compressed photos. The last section of the form allows for an overall assessment of site conditions, usefulness for collocation, and conformance to industry best practices. Please find the remote RF site survey form located in Attachment B.

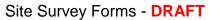




Attachment A - Dispatch center site survey form

SECTION A:	GENERAL SITE IN	IFORMATION		
Date	Click here to e	enter a date		
Survey Team	Click here to e			
In attendance (client, technical	Click here to e			
representative)	Click liefe to 6	enter text.		
Site name	Click here to e	enter text.		
Site address	Click here to e			
City	Click here to e			
County	Click here to e	enter text.		
Site phone number	Click here to e	enter text.		
Site owner and/or manager	Click here to e	enter text.		
	□ 911 PSAP	□ EOC □ TX/RX □	RX Only BACKUP	
Site type (check all that apply)	☐ Other see		•	
Construction type	Choose an ite	m.		
Condition	Choose an ite	m.		
Number of stories/floors		Choose an item.		
Provide details on what floor(s)	Click here to enter text.			
the radio equipment and operator				
positions are located				
Latitude (decimal)	Click here to enter text.			
Longitude (decimal)	Click here to enter text.			
Ground Elevation (AMSL) meters	Click here to e	enter text.		
Comments: Click here to enter text.				
Provide a SITE PLAN diagram in SE power feed, telephone system feed				
Is this a shared dispatch center?		□ Yes	□ No	
List agencies served by this disp	oatch center	Click here to enter text.		
Is this dispatch center also a backup?		□ Yes	□ No	
Agency(s) name and location		Click here to enter text.		
Does this location serve as an Emergency Ops Center?		□ Yes	□No	
List EOC specific equipment details		Click here to enter text.		
Does this location have a cache of user devices?		□ Yes	□ No	







List subscriber equipment details		Click here to enter text.			
Comments: Click here to enter text.					
SECTION B:	SITE A	CCESS			
Site is accessible by standard 2V	VD vehicle?	☐ Yes ☐ No			
	•	on, road type & length, special equipment – 4WD,			
combinations, key sets, etc.) Pro Comments: Click here to enter t		TIE GIAGRAM IN SECTION P.			
SECTION C: GENE	PAL SITE CONDITI	IONS and PERIMETER SECURITY			
SECTION C. GENE	INAL SITE CONDITI	ONO BITA I ENTINETER SECONTI			
☐ Perimeter Fence Condi	ition: Choose an	item.			
☐ Signs of vandalism ☐ Fence locked ☐ Exterior lighting ☐ Security Camera					
Security Camera monitored by v	vhom / where:	Click here to enter text.			
Emergency lighting system:	☐ Yes	□ No			
Mfr./Model:	Click her	re to enter text.			
Comments: Click here to enter t	ext.				
HVAC:	□ Yes	□ No			
Is HVAC dedicated to dispatch of and independent of other system	□ No				
Mfr./Model/Size Click here to enter text.					
Voltage/Amps/Phase: Click here to enter text.					
Is HVAC system redundant? ☐ Yes ☐ No					
Comments: Click here to enter text.					

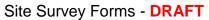






SECTION D: PHYSICAL ATTRIBUTES OF SURROUNDING LAND SPACE				
Ground around site	Choose an item.			
Property zoning type	Choose an item.			
Property ownership	Choose an item.			
Describe site surroundings	Click here to enter text.			
Other site use-this site	Choose an item.			
Other nearby sites	□ Yes	□ No		
Provide details below about other nearby sites of Comments: Click here to enter text. SECTION E: DISPATCH CO	or collocation use.			
Console system Mfr./Model: Click here to enter text.				
Console system software revision: Current no. of dispatch positions:	Click here to enter text. Click here to enter text.			
Expansion capacity no. of positions:	Click here to enter text.			
Number of backup positions:	Choose an item.			
Approx. age of console system:	Choose an item.			
Last upgrades/updates:	Click here to enter text.			
No. of channels programmed	Choose an item.			
No. of channels possible:	Choose an item.			
No. of talkgroups programmed:	Choose an item.			
Channel expansion capacity:	Choose an item.			
Is console patch capable?	□ Yes	□No		
No. of simultaneous consol patches supported	No. of simultaneous consol patches supported Choose an item.			
Is there a master UPS?	there a master UPS?			
Are outlets connected to the master UPS color coded?	□ Yes	□ No		
If yes, what color are the outlets connected to the master UPS?	L (lick here to enter text			







DISPATCH POSITION #1:					
Copy and paste this section for each dispatch po	osition. Be sure to number each	dispatch position section.			
No. of monitors for position #1:	Choose an item.				
No. of touchscreen monitors:	Choose an item.				
No. of speakers for position #1:	Choose an item.				
Describe speaker function(s):	Click here to enter text.				
Is dispatch position configured for remote control/monitoring operations? For example bay doors, alert sirens, remote site intrusion	□Yes	□ No			
Describe remote control/monitoring operations: (Check all that apply)	Bay doors Dispatch center entry Remote site intrusion	☐ Alert sirens ☐ Intercom system ☐ Video cameras ☐ Other see comments			
Comments: Click here to enter text.					
No. of PCs for this dispatch position:					
PC No. 1	Function: Click here to enter to				
	Mfr. /model: Click here to ente				
PC No. 2	Operating System: Click here to				
1 C NO. 2	Function: Click here to enter to				
	Mfr. /model: Click here to enter Operating System: Click here to				
	Function: Click here to enter te				
PC No. 3	Mfr. /model: Click here to enter				
	Operating System: Click here to				
Type of foot switch	Choose an item.				
Foot switch Mfr./Model	Click here to enter text.				
Headset Mfr./Model	Click here to enter text.				





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Instant recall recorder(s) installed:	□ Yes	□No		
Recall recorder Mfr./Model	Click here to enter text.			
Dedicated (local) UPS for this dispatch position:	□ Yes	□No		
External (local) surge protection for this dispatch position:	□Yes	□No		
Dedicated AC circuit for each PC/monitor:	□ Yes	□ No		
If no, common breaker:	☐ Yes	□No		
Auxiliary AC circuit (non-protected):	□Yes	□No		
Auxiliary AC circuit:	Amps: Click here to enter text.			
	Breaker: Click here to enter te	xt.		
	Panel: Click here to enter text.			
Control station:	□Yes	□No		
Control station mfr./model:	Click here to enter text.			
Antenna System:	☐ Dedicated	☐ Combined		
Antenna type: mfr./gain:	Click here to enter text.			
Transmission line size/length:	Click here to enter text.			
Local remotes interfaced to control station:	□Yes	□No		
Local remotes mfr./model	Click here to enter text.			
No. of local remotes:	Choose an item.			
Console furniture mfr./model:	Click here to enter text.			
Chair mfr./model	Click here to enter text.			
Comments: Click here to enter text.				
Dedicated AC circuit for each PC/Monitor:	□ Yes	□ No		
If no, Common Breaker:	Click here to enter text.			
Circuit #1: PC Click here to enter text.	Amps: Click here to enter text.			
	Breaker: Click here to enter text.			
	Panel: Click here to enter text.			
The state of the s				





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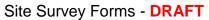
Circuit #2: PC Click here to enter text.	Amps: Click here to enter text. Breaker: Click here to enter text.		
	Panel: Click here to enter text.		
	Location: Click here to enter text.		
Circuit #3: PC Click here to enter text.	Amps: Click here to enter text.		
	Breaker: Click here to enter text.		
	Panel: Click here to enter text.		
	Location: Click here to enter text.		
Comments: Click here to enter text.			





SECTION F: CHANNEL/TALKGROUP LIST ANI (if Trunked or Channel Name Frequencies Encrypted Legacy Interface Type of encryption conventional conventional TX: Click here to enter Click here to enter □ Y \square N \square Y □ Y \square N Choose an item. Choose an item. text. text. RX: TX: Click here to enter Click here to enter \square N \square N □ Y \square N \square \vee □ Y Choose an item. Choose an item. text. text. RX: TX: Click here to enter Click here to enter \square N □ Y \square N □ Y □ Y \square N Choose an item. Choose an item. text. text. RX: TX: Click here to enter Click here to enter \square Y \square N □ Y \square N □ Y \square N Choose an item. Choose an item. text. text. RX: TX: Click here to enter Click here to enter □ Y \square N \square N □ Y □ Y Choose an item. Choose an item. text. text. RX: TX: Click here to enter Click here to enter Пγ □ Y \square N Choose an item. Choose an item. □ Y text. text. RX: TX: Click here to enter Click here to enter \square N \square Y \square N \square Y \square N □ Y Choose an item. Choose an item. text. text. RX: TX: Click here to enter Click here to enter \square N \square N \square Y \square Y \square N RX: Choose an item. □ Y Choose an item. text. text. RX:







SECTION G:	ANCILLARY EQUIPMEN	Т	
Master Clock	□ Yes	□No	
Master Clock Mfr./Model:	Click here to enter text.		
Computer Aided Dispatch:	□ Yes	□No	
Voice logging recorder (VLR):	□ Yes	□ No	
Mfr./Model/Channels:	Click here to enter text.		
Comments: Click here to enter to	ext.		
SECTION H: COMPUTER AID	DED DISPATCH (CAD) / GEOGRAP	PHIC INFORMATION SYSTEM (GIS)	
Voice over IP dispatch:	□ Yes	□ No	
GIS system:	□ Yes □ No		
No. of positions with GIS	Click here to enter text.		
GIS Mfr./Model:	Click here to enter text.		
AVL system:	☐ Yes ☐ No		
Mfr./Model:	Click here to enter text.		
Approx. no. of users:	Click here to enter text.		
No. of AVL system sites:	Click here to enter text.	Click here to enter text.	
List site names:	Click here to enter text.	Click here to enter text.	
	Click here to enter text.	Click here to enter text.	
System frequency band:	Choose an item.		
Mobile data system:	□ Yes □ No		
Mobile data system Mfr./Model	Click here to enter text.		
Provide site names:	Click here to enter text. Click here to enter text.		
	Click here to enter text.	Click here to enter text.	
Approx. no. of users:	Click here to enter text.	Click here to enter text.	

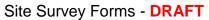






System frequency band:	Choose an item.				
Voice logging recorder (VLR):	□ Yes		□No		
VLR Interface type:	enter text.				
Comments: Click here to enter to	ext.				
					_
Use more pages as needed for d	locumenting a	dditional dispatch	operator po	ositions.	_
SECTION I: CO	NSOLE ELECTR	RONICS EQUIPMEN	T ROOM		
Are console electronics locat room as operator positions?	ed in same	□ Yes		□No	
Are console electronics co-leother radio or IT equipment?	ocated with	□ Yes	4	□No	
Room type:		Choose an item			
Room condition:		Choose an item			
Room dimensions (in feet and in	nches):	Height: Click here to enter text.			
		Width: Click here to enter text.			
		Length: Click here to enter text.			
Door locked:		☐ Yes	<u> </u>	□ No	_
Lock condition:		Choose an item.			
Door alarmed:		☐ Yes		□ No	
Cable tray(s):		□ Yes		□No	
If Yes, height above racks:		Click here to enter text.			
Total number of racks/cabi	nets:	Choose an item.			
No. of racks used for radio/console equipment:		Choose an item.			
Expansion space available in room:		□ Yes		□ No	
Expansion space available in racks:		□ Yes		□ No	
HVAC:		☐ Yes		□ No	
HVAC dedicated to equipment room and independent of other systems:		□ Yes		□ No	
HVAC redundant:		□ Yes		□ No	
Voltage:		Click here to enter text.			
Amperage:		Click here to enter text.			







Phase: Click here to enter text.					
Comments (location and access to electronics room, room conditions detail, etc.): Click here to enter					
text.					
CEB Grounding:					
Evidence of a single-point ground system:	□ Yes	□ No			
Ground bus bar:	□Yes	□No			
Cable entry port grounded:	□ Yes	□ No			
Telephone system grounded:	□ Yes	□No			
Frames/cabinets grounded:	□ Yes	□No			
Rack mounted equipment grounded:	□Yes	□No			
Lightning arrestors installed:	□ Yes	□No			
Number of lightning arrestors installed:	Number of lightning arrestors installed: Choose an item.				
Mfr./Model of lightning arrestors:	Click here to enter text.				
Lightning arrestors grounded:	☐ Yes	□No			
Cable tray(s) grounded properly:	□ Yes	□No			
All metal objects tied to interior halo (frames, windows, HVAC, doors, fixtures):	□ Yes	□ No			
Comments: Click here to enter text.					
Provide a FLOOR PLAN diagram in SECTION R including dimensions, racks, wall equipment, etc.					





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SECTION J:		CONSOLE/RADIO E	QUITWENT			
Provide FLOOR PLAN diagram in SECTION R showing racks, cabinets, and locations of all related equipment including egress and dimensions. List equipment below. Use more pages as needed.						
Equipment Type (electronics , voice logger, network clock, repeater, receiver, voter, etc.)	Mfr.	Model/Serial Number	Rack#	Additional Data (channels, frequencies tone codes, etc.)		
		Ť				
Comments: Click here	to enter text					



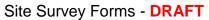




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SECTION K: BACKHA	AUL SYSTEMS			
Backhaul systems:	□ Yes	□No		
Backhaul system type:	Choose an item.			
Traffic backhauled:	Choose an item.			
Backhaul redundant:	□ Yes	□ No		
Backhaul provider(s)	Click here to enter text.			
Backhaul equipment Mfr./Model/Size:	Click here to enter text.			
Comments (fractional T1, regular T1, DS3 licensed enter text.	l microwave, UHF links, phone li	nes, etc.): Click here to		
SECTION L: POWER SYSTEMS				
Service entrance voltage:	Choose an item.			
Service entrance power phase:	□1 □3			
Circuit breaker panel capacity:	Choose an item.			
Total No. of panels used:	Choose an item.			
Panel type(s) used Mfr. / Model / Size:	Click here to enter text.			
No. of open breaker Slots:	Choose an item.			
No. of installed, but unused breakers:	Choose an item.			
AC surge protection system:	□ Yes	□ No		
Mfr./Model/Size:	Click here to enter text.			
AC disconnect:	□ Yes	□ No		
UPS:	□ Yes	□ No		
UPS: Mfr./Model/Size:	UPS: Mfr./Model/Size: Click here to enter text.			
GENERATOR POWER				
External Generator (connector):	□ Yes	□No		
Mfr./Model/Size:	Click here to enter text.			
BACKUP POWER GENERATOR:	☐ Yes ☐ No			
Mfr./Model/Size:	Click here to enter text.			







Fuel Type:	Choose an item.			
Tank Size:	Click here to enter text.			
Location:	Click here to enter text.			
Transfer Switch:	☐ Yes	□No		
Mfr./Model/Size:	Click here to enter text.			
Generator UPS:	□ Yes	□No		
Mfr./Model/Size:	Click here to enter text.			
Voltage:	Click here to enter text.			
Amperage:	Click here to enter text.			
Phase:	Click here to enter text.			
UPS Battery System:	√ Yes □	No		
% of UPS capacity currently being used:	Click here to enter text.			
Quantity of batteries:	Click here to enter text.			
Voltage:	□ 12V □ 24V	□ 48V		
Mfr./Model/Amps hrs.	Click here to enter text.	·		
Location:	Click here to enter text.			
DC power system:	Yes	No		
Voltage:	□ 12V □ 24V	□ 48V		
Mfr./Model/Amps hrs.	Click here to enter text.			
Quantity of batteries:	Click here to enter text.			
Mfr./Model/Amps hrs.	Click here to enter text.			
Location:	Click here to enter text.			
Comments: Click here to enter text.				
SECTION M: OTHER SYSTEMS				
Secondary HVAC systems:	□ Yes	□No		
Mfr./Model:	Click here to enter text.			
FIRE SUPPRESSION:				
Active fire alarm system:	□ Yes	□ No		







Monitorea:	∟ Yes	L NO			
If monitored, by whom?	Click here to enter text.				
Active fire suppression system:	□ Yes	□ No			
Type of active fire suppression system:	Click here to enter text.				
Date of Last Inspection:	Click here to enter text.				
Fire extinguisher(s) on site:	□Yes	□ No			
Quantity of fire extinguishers on site:	Click here to enter text.				
Type of fire extinguishers on site :	Click here to enter text.				
Date of Last Inspection:	Click here to enter text.				
Comments: Click here to enter text.					
Radio failure alarm monitoring:	□ Yes	□No			
System Mfr./Model:	Click here to enter text.				
HVAC failure alarm monitoring:	□ Yes	□ No			
System Mfr./Model:	Click here to enter text.				
Other failure alarm monitoring:	□ Yes	□ No			
System Mfr./Model:	Click here to enter text.				
Comments: Click here to enter text.					
SECTION N: TOWER DETAILS					
Provide a TOWER-ANTENNA layout diagram in SECTION T showing antennas and related equipment (no cables), denoting where space is available. Provide plan view with directional orientation. If possible, show all legs with equipment attached.					
Antenna structure:	Choose an item.				
Condition:	Choose an item.				
ASR Posted:	□ Y ASR #:	□ N			
Structure height (meters):	Click here to enter text.				
No. of tower legs:	Click here to enter text.				
Face width (lowest section):	Click here to enter text.				







Tube Type or Angle members:		Click here to enter tex	t.	
Monopole base diameter:		Click here to enter text.		
Antenna mounting location on water tower:		Click here to enter tex	t.	
Any obvious microwave path obstructions (describe below and/or show on Site Plan:	□ Yes		□ No	
Comments: Click here to enter text.		L	_	
Visual condition of antenna mounting hardware:		Choose an item.		
Visible available antenna locations (annotat Tower-Antenna diagram):	□ Yes		□ No	
Tower loading/design documentation available:		☐ Yes		□ No
Source:	Click here to enter text.			
Suggest tower loading study prior to installing additional antennas:	□ Yes		□ No	
Comments: Click here to enter text.				
Transmission line condition:	Choose	e an item.		
Lines properly installed:	☐ Yes			No
nes installed with drip loops:				No
Transmission line connector condition:	Transmission line connector condition: Choose			
Ice bridge:	□ Yes			No
Ice bridge condition:	Choose	e an item.		
Ice bridge grounded:	☐ Yes			No
Visible cable splices	□ Yes			No
Line incrementally grounded	☐ Yes	Interval:		No
Standard cable entry port device:	□ Yes			No
Number of entry ports:	Click h	ere to enter text.		
Entry ports available: Click he		ere to enter text.		







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Comments: Click here to enter text.		
	Ι_	Ι_
Grounding at tower top/antenna base:	□ Yes	□ No
Grounding bars used on tower:	□ Yes	□ No
Grounding at tower base:	□ Yes	□ No
Grounding at each tower leg:	□ Yes	□ No
Evidence of tower ground ring:	□ Yes	□ No
Evidence of single-point ground system:	□ Yes	□ No
Lines grounded at building entry:	□ Yes	□No
Comments: Click here to enter text.		





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rovide a TOW	/ER-ANTENN/	A diagram	showing	antenna place TOWER / MO		gs (including	spare spa	ices) in SE	CHON I.
Antenna Type (Mfr Model)	Mounting Height	Tower leg	Gain (dBi)	Azimuth (If Applicable)	Frequency Range	Tx, Rx, or both antenna	Tower top amp	Cable size	Cable condition
	L.								
omments: Cli	ck here to en	ter text.							
			ROOF	MOUNTED TOV	WER STRUCTU		_		
Antenna Type (Mfr Model)	Mounting Height	Mount type	Gain (dBi)	Azimuth (If Applicable)	Frequency Range	Tx, Rx, or both antenna	Tower top amp	Cable size	Cable conditie
	_								
				1					





SECTION P:	MAP TO SITE				
Provide a street-level map of the	e site. (Click icon below to insert map)				
Commander Click house to accept					
Comments: Click here to enter t	ext.				





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SECTION Q:	SITE PLAN				
Provide a site plan including build icon below to insert Site Plan fron	ling, tower, perimeter fence, and any other applicable structures. (Click n files)				
Comments: Click here to enter tex	xt.				

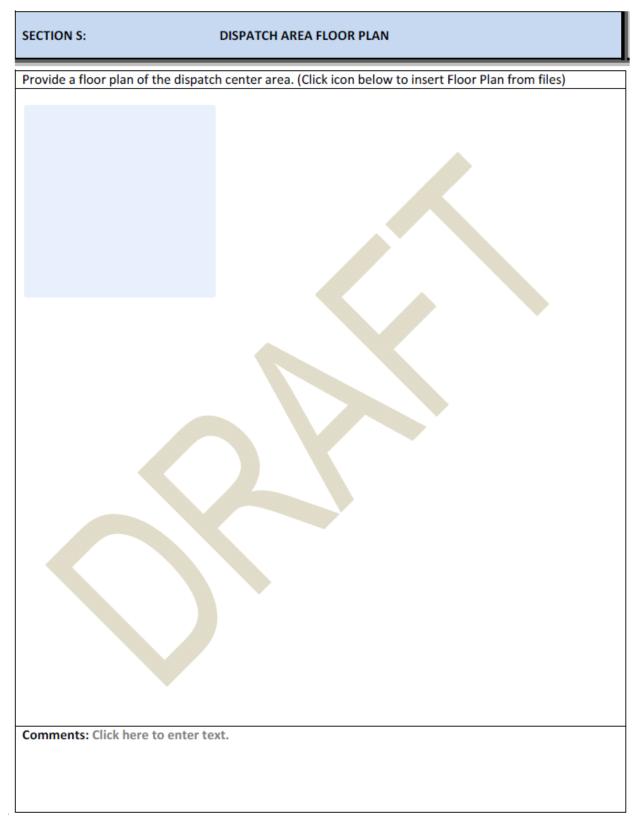




SECTION R: **ELECTRONICS ROOM FLOOR PLAN** Provide a floor plan with rack locations, wall equipment, co-located systems, available space, etc. (Click icon below to insert Floor Plan from files) Comments: Click here to enter text.

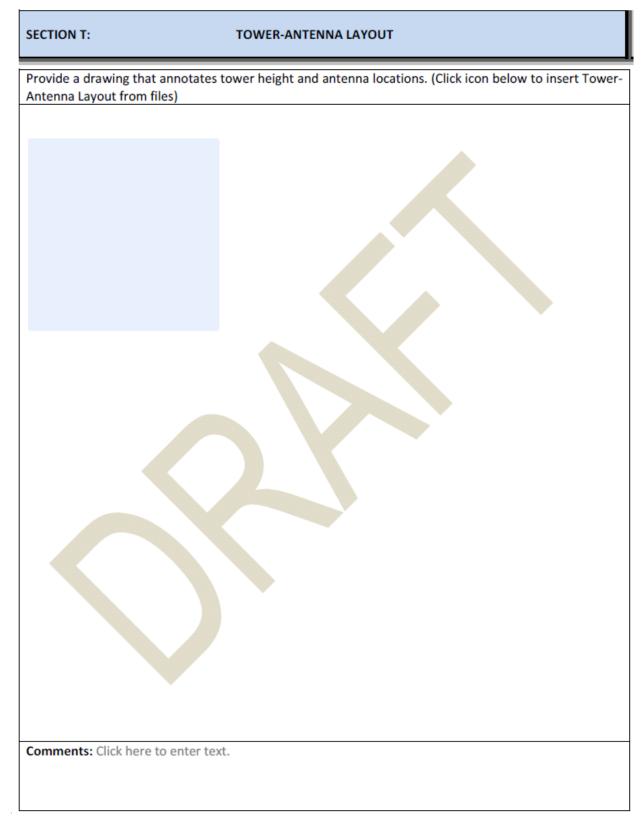
















SECTION U:	SITE PHOTGRAPH LIST

COMPLETED	ITEM	NOTES
	Overall site photo	Front, sides and rear, including trees
	Shelter/Bldg	Distance shot
	Shelter/Bldg	Exterior front, sides and rear
	Tower structure or rooftop	Multiple elevations, roof mounted structures
	Tower Base	Foundation, model name plate
	Tower Leg Grounding	Each Leg
	Antennas	Current and possible tower mounting position
	Roof Mounted Antennas and Structures	All angles
	Rooftop antenna mounting locations	If applicable
	Rooftop conduit routing	If applicable
	Rooftop conduit breakout box	If applicable
	Waveguide/feed line	Entry/exit from shelter
	External Ground Bar	Exiting shelter/bldg
	Ice Bridge	Full length, start /end of ice bridge, underside
	Generator (External)	Name plate, all angles, capacity indicator
	Equipment Room (Inside)	All angles: front, sides, rear
	Cable Tray/Ladder	All angles: show cable routing
	Cable Entry Panel (Wall feed through)	Inside and outside
	Standoff bracket	If applicable
	Equipment Room Grounding System	Bus bar, metal structures, racks/cabinets
	Equipment Racks	All angles: front, sides, rear
	Radio and Peripheral Equipment	Name/face plates, rear and front views
	Power Equipment (Internal)	AC panels (in/out), generator, battery bank
	AC Surge Device installation	Close up and focused
	Lightning Arrestor installation	Polyphaser, Transtector, other
	Site entry door and lock	Inside and outside





SECTION U: SITE PHOTGRAPH LIST

COMPLETED	ITEM	NOTES
	Present and proposed rack locations	All angles: front, sides, rear
	Phone line termination	Close up and focused
	Ethernet port termination (if any)	If applicable
	AC outlets	Close up and focused
	UPS	Nameplate, outlets
	Main Power breaker panels	AC Disconnect; Nameplate
	Console electronics racks	All angles: front, sides, rear
	Console electronics cable routing	All angles: show cable routing
	Dispatch positions furniture	All angles
	Dispatch positions layout	All angles
	Dispatch monitor screens	Screenshots on external drive preferred
	Dispatch operations equipment	AVL, mobile data, control stations, recorders





SECTION V:	SITE PH	нотоѕ
Provide compressed photos in photographs from files)	n this section. Add a	additional pages as needed. (click icon below to insert
ProjectName_SiteName_Pl	notoDescription	2. ProjectName_SiteName_PhotoDescription
3. ProjectName_SiteName_Ph	otoDescription	4. ProjectName_SiteName_PhotoDescription
E ProjectName SiteName D	hotoDescription	6 ProjectName SiteName PhotoDescription

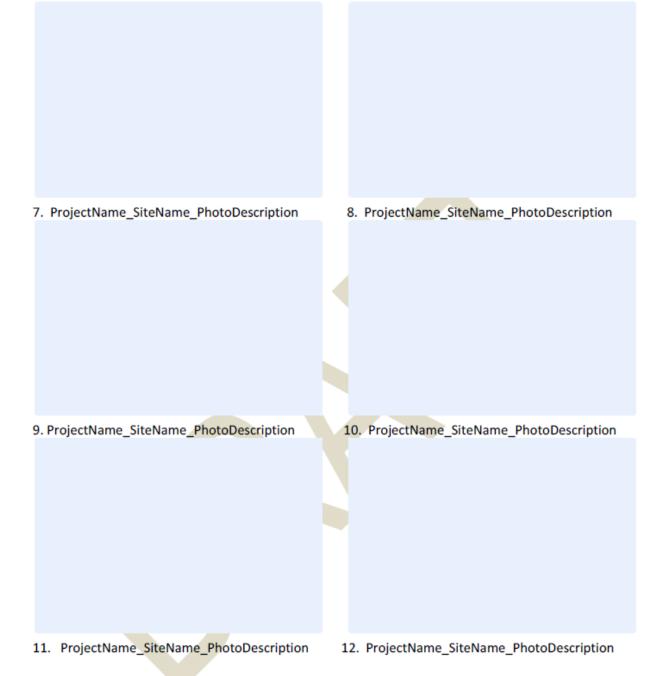
- 5. ProjectName_SiteName_PhotoDescription 6. ProjectName_SiteName_PhotoDescription





lviay 20, 2010







SECTION W:	SITE ASSESSMENT SUMMARY
Provide an assessment on site condition	tions, usefulness for collocation, or any special egress details.
Click here to enter text.	

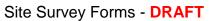




Attachment B - Remote RF site survey form

SECTION A: GENERAL SITE INFORMATION						
Provide a SITE PLAN diagram with shelter, fe	ence, tower, and other site equipment in SECTION M.					
Date: Click here to enter a date.	Survey team: Click here to enter text.					
In attendance (customer, technical rep):	Customer point of contact (Phone/Email) Click here to enter te	xt.				
Click here to enter text.						
Site name: Click here to enter text. Address: Click here to enter text.						
Radio system name: County:						
Site phone: Click here to enter text.	te phone: Click here to enter text. Site owner and/or manager: Click here to enter text.					
Site type: Choose an item.						
Comments: Click here to enter text.						
Latitude: Click here to enter text.	ongitude: Click here to enter text. Ground Elevation (AMSL) (n Click here to enter text.	neters):				
SECTION B: SITE ACCESS						
Site accessible by standard 2WD vehicle?	☐ Yes ☐ No					
sets, etc.) Provide a MAP TO SITE diagram in	rsection, road type & length, special equipment – 4WD, combinat n SECTION L.	ions, key				
Comments: Click here to enter text.						
SECTION C: GENERAL SITE CONDITIONS and PERIMETER SECURITY						
□ Parimeter Ferre	Condition: Choose an item.					
☐ Perimeter Fence	Condition. Choose all Item.					
☐ Signs of vandalism ☐ Fence						
	te lock					







SECTION D: PHYSICAL AVAILABILITY OF SURROUNDING LAND SPACE (Observations)						
Ground around site:	Choose an item.					
Property zoning type:	Choose an item.					
Property ownership:	Choose an item.					
Other site use-this site	Choose an item.					
Other nearby sites:	□ Yes □ No					
Comments: Click here to enter text.						
SECTION E: TOWER DETAILS						
Provide a TOWER-ANTENNA layout diagram in SECTION O showing antennas and related equipment (no cables), denoting where space is available. Provide plan view with directional orientation. If possible, show all legs with equipment attached.						
Antenna structure:						
Condition:	Choose an item.					
ASR Posted:	□ Y ASR#: □ N					
Structure height (meters):	Click here to enter text.					
No. of tower legs:	Click here to enter text.					
Face width (lowest section):	Click here to enter text.					
Tube Type or Angle members:	Click here to enter text.					
Monopole base diameter:	Click here to enter text.					
Antenna mounting location on water tower:	Click here to enter text.					
Any obvious microwave path obstructions (describe below and/or show on Site Plan:	□ Yes	□ No				
Comments: Click here to enter text.						





Site Survey Forms - **DRAFT**

Visual condition of antenna mounting hardware:		Choose an item.			
Visible available antenna locations (annotate on Tower- Antenna diagram):		□ Yes	□ No		
Tower loading/design documentation available:	□ Yes	□ No			
Source:		Click here to enter text.			
Suggest tower loading study prior to installing additionantennas:	onal	□ Yes	□ No		
Comments: Click here to enter text.					
Transmission line condition:	Choos	se an item.			
Lines properly installed:	□ Yes		□No		
Lines installed with drip loops:	□ Yes		□ No		
Transmission line connector condition:	Choose an item.				
Ice bridge:	□ Yes □ No				
Ice bridge condition:	Choos	se an item.			
Ice bridge grounded:	□ Yes		□ No		
Visible cable splices	□ Yes		□ No		
Line incrementally grounded	☐ Yes	Interval:	□ No		
Standard cable entry port device:	□ Yes		□ No		
Number of entry ports:	Click I	here to enter text.			
Entry ports available:	Click I	here to enter text.			
Comments: Click here to enter text.					
Grounding at tower top/antenna base:	□ Yes		□ No		
Grounding bars used on tower:	□ Yes		□ No		
Grounding at tower base:	□ Yes		□ No		





Site Survey Forms - DRAFT Next Generation Wireless Emergency Public Safety Communications Network

Grounding at each tower leg:	□ Yes	□ No		
Evidence of tower ground ring:	□ Yes	□ No		
Evidence of single-point ground system:	□ Yes	□ No		
Lines grounded at building entry:	□ Yes	□ No		
Comments: Click here to enter text.				





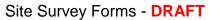




Site Survey Forms - DRAFT Next Generation Wireless Emergency Public Safety Communications Network

SECTION F:	SECTION F: TOWER-ANTENNA DETAILS								
		A diagram	showing	g antenna place	ment on all le	gs (including	spare spa	aces) in SI	ECTION O.
TOWER / MO Antenna Type (Mfr Model)	Mounting Height	Tower leg	Gain (dBi)	Azimuth (If Applicable)	Frequency Range	Tx, Rx, or both antenna	Tower top amp	Cable size	Cable condition
						A			
Comments: C									
Antenna Type (Mfr Model)	Mounting Height	Mount type	Gain (dBi)	Azimuth (If Applicable)	Frequency Range	Tx, Rx, or both antenna	Tower top amp	Cable size	Cable condition
		1		_					
	l'ala la ancie								
Comments: C	nck nere to er	iter text.							







SECTION G: RF EQUIPMENT HOUSING			
Provide a FLOOR PLAN diagram in SECTION N including dimensions, rack rows, wall equipment, etc.			
☐ Room in a larger building ☐ Communic	ations	Shelter	
Shelter construction type: Choose an item.			
If Prefab shelter give Mfr./Model: If building, No. of stories/floors:			ries/floors:
Room/Shelter condition:	□ Go	ood 🗆 Poor	
Dimensions:	Heigh	nt Width L	ength
Door lock:	□ Ye	es	□No
Lock condition:	□ Go	ood 🗆 Poor	
Door alarmed:	□ Ye	25	□No
Cable tray(s):	□ Y	□ N If Yes, height a	bove racks:
Cable dehydrator system:	□ Ye	es	□No
Mfr./Model:	Click	here to enter text.	
No. of total racks/cabinets:	Click here to enter text.		
No. of racks used for equipment of interest:	Click	here to enter text.	
Expansion space available in shelter:	□ Ye	es	□No
Expansion space available in racks:		□ No	
Comments (location and access to room in larger building, shelter conditions and layout, etc.):Click here to enter text.			
GROUNDING			
Evidence of single-point ground system:		□ Yes	□ No
Ground bus bar:		□ Yes	□ No
Evidence of shelter ground ring:		□ Yes	□ No
Cable entry port/feed-throughs grounded: ☐ Yes ☐ No			□No
Does shelter have a 4 point ground:		□ Yes	□ No







Is 4 point ground tied to a single point and to exterior:	□ Yes	□ No
Frames/cabinets grounded:	□ Yes	□No
Rack mounted equipment grounded:	□ Yes	□ No
Lightning arrestors installed:	□ Yes	□No
How many:	Click here to enter text.	
Mfr./Model:	Click here to enter text.	
Telco:	□ Yes	□No
Lightning arrestors grounded:	□ Yes	□ No
Cable tray(s)grounded properly:	□ Yes	□ No
All metal objects tied to interior halo (frames, windows, HVAC, Doors, fixtures):	□Yes	□No
Comments: Click here to enter text.		



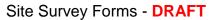


ency Name and Equipment				e pages as needed.
pe (i.e., repeater, voting ceiver, base station, mbiner, radio link, etc.)	Mfr.	Model/Serial Number	Rack #	Additional Data (i.e., channel names, TX/RX frequencies, ton codes, etc.)
	1			
	4			



SECTION I: BACKHAU	IL SYSTEMS	
Backhaul systems:	Choose an item.	
Traffic backhauled:	Choose an item.	
Backhaul redundant:	□ Yes	□No
Backhaul provider(s):	Click here to enter text.	
Backhaul equipment: Mfr./Model/Size:	Click here to enter text.	
Comments (fractional T1, licensed microwave, UHF here to enter text.	links, phone lines, LTE, Wi	Fi, WiMAX, etc.): Click
SECTION J: POWER S	SYSTEMS	
Service entrance voltage:	Choose an item.	
Phase:	Choose an item.	
Circuit breaker panel capacity:	Choose an item.	
Total No. of panels used:	Click here to enter text.	
Panel Type(s) used:	Click here to enter text.	
Mfr./Model/Size:	Click here to enter text.	
Panel use: No. of open breaker slots:	Click here to enter text.	
No. of installed but unused breakers:	Click here to enter text.	
AC surge protection system:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
AC disconnect:	□ Yes	□ No
UPS:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
External Generator connector:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	







BACKUP POWER GENERATOR:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
Fuel type:	Choose an item. Ta	nk Size:
Other backup power-UPS details:	Click here to enter text.	
DC power system:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
Voltage:	Choose an item.	
Quantity of batteries:	Click here to enter text.	
Mfr. and model:	Click here to enter text.	
Comments: Click here to enter text.		
		•
SECTION K: OTHER SYSTEMS		
HVAC:	□Yes	□ No
HVAC: Mfr./Model/Size:	□ Yes	□ No
	☐ Yes ☐ Yes	□ No
Mfr./Model/Size:		
Mfr./Model/Size: HVAC Redundant:	Yes	□ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system:	☐ Yes	□ No □ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system: Monitored:	☐ Yes ☐ Yes ☐ Yes	□ No □ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system: Monitored: Monitored by:	☐ Yes ☐ Yes ☐ Yes ☐ Click here to enter text.	□ No □ No □ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system: Monitored: Monitored by: Active fire suppression system:	☐ Yes ☐ Yes ☐ Yes ☐ Click here to enter text. ☐ Yes	□ No □ No □ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system: Monitored: Monitored by: Active fire suppression system: Type:	☐ Yes ☐ Yes ☐ Yes ☐ Click here to enter text. ☐ Yes Click here to enter text.	□ No □ No □ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system: Monitored: Monitored by: Active fire suppression system: Type: Date of Last Inspection:	☐ Yes ☐ Yes ☐ Yes ☐ Click here to enter text. ☐ Yes Click here to enter text. Click here to enter text.	□ No □ No □ No
Mfr./Model/Size: HVAC Redundant: Active fire alarm system: Monitored: Monitored by: Active fire suppression system: Type: Date of Last Inspection: Fire extinguisher(s) on site:	☐ Yes ☐ Yes ☐ Yes ☐ Click here to enter text. ☐ Yes ☐ Click here to enter text. ☐ Click here to enter text. ☐ Yes	□ No □ No □ No



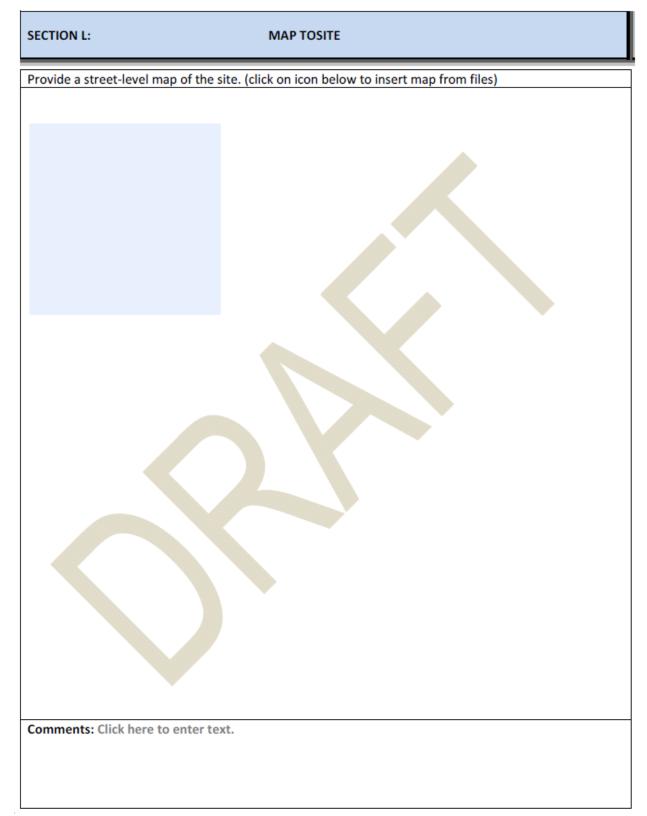




Comments: Click here to enter text.		
Radio failure alarm monitoring:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
HVAC failure alarm monitoring:	□ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
Other failure alarm monitoring:	☐ Yes	□ No
Mfr./Model/Size:	Click here to enter text.	
Comments: Click here to enter text.		











SECTION M:	SITE PLAN
Provide a site plan including shelf on icon below to insert Site Plan f	ter, tower, perimeter fence, and any other applicable structures. (click rom files)
Comments: Click here to enter te	xt.





SECTION N:	RF HOUSING FLOOR PLAN
Provide a floor plan with rack loo on icon below to insert RF Housin	ations, wall equipment, co-located systems, available space, etc. (click g Floor Plan from files)
Comments: Click here to enter te	xt.
Comments. Click liefe to effect te	





SECTION O:	TOWER-ANTENNA LAYOUT
Provide a drawing that annotat the Tower-Antenna Layout fron	es tower height and antenna locations. (click on the icon below to insert n files)
Comments:Click here to enter	text.





SECTION P:	SITE PHOTGRAPH LIST
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COMPLETED	ITEM	NOTES
	Overall site photo	Front, sides and rear, including trees
	Shelter/Bldg	Distance shot
	Shelter/Bldg	Exterior front, sides and rear
	Tower structure or rooftop	Multiple elevations, roof mounted structures
	Tower Base	Foundation, model name plate
	Tower Leg Grounding	Each Leg
	Antennas	Current and possible tower mounting position
	Roof Mounted Antennas and Structures	All angles
	Rooftop antenna mounting locations	If applicable
	Rooftop conduit routing	If applicable
	Rooftop conduit breakout box	If applicable
	Waveguide/feed line	Entry/exit from Shelter
	External Ground Bar	Exiting shelter/bldg
	Ice Bridge	Full length, start /end of ice bridge, underside
	Generator (External)	Name plate, all angles, capacity indicator
	Equipment Room (Inside)	All angles: front, sides, rear
	Cable Tray/Ladder	All angles, show cable routing
	Cable Entry Panel (Wall feed through)	Inside and outside
	Standoff bracket	If applicable
	Equipment Room Grounding System	Bus bar, metal structures, racks/cabinets
	Equipment Racks	All angles: front, sides, rear
	Radio and Peripheral Equipment	Name/face plates, rear and front views
	Power Equipment (Internal)	AC panels (in/out), generator, battery bank
	AC Surge Device installation	Close up and focused
	Lightning Arrestor installation	Polyphaser, Transtector, other
	Site entry door and lock	Inside and outside
	Present and proposed rack locations	All angles: front, sides, rear
	Phone line termination	Close up and focused
	Ethernet port termination (if any)	If applicable
	AC outlets	Close up and focused





SECTION P:	SITE PHOTGRAPH LIST	
COMPLETED	ITEM	NOTES
	UPS	Nameplate, outlets
	Main Power breaker panels	AC Disconnect; Nameplate
	Other	If applicable
	Other	If applicable







SECTION Q:	SITE PHOTOS
Provide compressed photos in this section. Add additional pages as needed. (click on the icons below to insert photographs from files)	
ProjectName_SiteName_PhotoDescription	on 2. ProjectName_SiteName_PhotoDescription
3. ProjectName_SiteName_PhotoDescription	4. ProjectName_SiteName_PhotoDescription
5. ProjectName_SiteName_PhotoDescript	ion 6. ProjectName_SiteName_PhotoDescription





